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Dairy Herd Improvement Letter

Vol. 56, No. 2

March 1980

NATIONAL COOPERATIVE
DAIRY HERD IMPROVEMENT
PROGRAM
A dairy recordkeeping plan
for every herd

- Standardized Lactation Averages by Breed for Cows on Official Test, Calving in 1977
- Policies for Distributing Bull-Owner Sire Summaries

U.S. Department of Agriculture
Science and Education Administration

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Dairy Herd Improvement Letter

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STATE AND NATIONAL STANDARDIZED LACTATION AVERAGES BY BREED FOR COWS ON OFFICIAL TEST, CALVING IN 1977

By Rex L. Powell[1]

This report provides State and national standardized lactation averages by breed for cows on official test that calved in 1977 (tables 1 and 2). These data include the number of records and production of cows that contribute to genetic evaluations. A similar number of records were not usable because of missing sire identification or failure to pass USDA edits (3). Records were standardized for age and month of calving (2) and times milked per day (4). Incomplete records were projected to 305 days (1). Thus, the averages presented are on a 305-day, 2X, mature-equivalent basis. Fat percentages were computed from the average standardized milk and fat yields.

Comparisons with previous national averages (5, 6, 7, 8) are given in table 3. The total number of records increased considerably (26 percent) from 1971. Increases were 34 percent for Holsteins and 12 percent for Brown Swiss, whereas records for Guernseys decreased by 29 percent. There was little change in the number of records from 1971 to 1977 for the Ayrshire (0 percent), Jersey (+4 percent), and Milking Shorthorn (+2 percent) breeds. Unfavorable feeding conditions are reflected in the generally lower milk production following 1972 and 1973 calvings. Milk production changes per cow from 1971 to 1977 showed increases of between 692 (Brown Swiss) and 1,370 pounds (Holstein). Fat production was up in all breeds, although fat percentage decreased in all breeds and was particularly lower in Jerseys.

To compare particular State and breed combinations over the years, use reference (5) and tables 1 and 2. Changes in production averages will be difficult to interpret for the less numerous State-breed combinations, because herds leaving or entering official test can have a substantial impact. Changes in number of records from 1971 to 1977 are large even for States that are among those with the most records for a particular breed. Changes in number of records are given in table 4 for 16 States that have substantial numbers in at least 3 breeds. Notice that the number of records in many State-breed combinations changed by 30 percent and more. Improvements (or changes) in management or breeding practices would be best measured where the same herds were represented in all years of data. States would not necessarily rank the same on the standardized lactation averages presented here as they would on average rolling 365-day herd averages of actual production. The differences can be broadly categorized into standardized versus actual production and possible days of production of 305 or less versus 365. The first difference includes rates of maturity among regions and the second difference includes whether days dry are considered. This report best measures changes in the number and standardized production of cows that contribute to genetic evaluations.

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TABLE 1.--STATE AND NATIONAL STANDARDIZED LACTATION AVERAGES FOR AYRSHIRE, GUERNSEY, AND HOLSTEIN COWS ON OFFICIAL TEST, CALVING IN 1977 1/

STATE	AYRSHIRE RECORDS	AYRSHIRE MILK	AYRSHIRE FAT	AYRSHIRE FAT	GUERNSEY RECORDS	GUERNSEY MILK	GUERNSEY FAT	GUERNSEY FAT	HOLSTEIN RECORDS	HOLSTEIN MILK	HOLSTEIN FAT	HOLSTEIN FAT
	NUMBER	LB	PCT	LB	NUMBER	LB	PCT	LB	NUMBER	LB	PCT	LB
ALABAMA----------	65	11,210	3.60	403	127	10,590	4.25	450	4,682	15,655	3.51	550
ALASKA-----------	---	---	---	---	---	---	---	---	65	14,540	3.40	495
ARIZONA----------	3	12,983	3.41	443	1,271	12,621	4.41	557	5,542	17,647	3.46	610
ARKANSAS---------	21	10,410	3.62	377	214	10,507	4.45	468	2,566	15,105	3.30	499
CALIFORNIA-------	208	14,511	3.94	572	2,412	12,533	4.47	560	110,942	18,878	3.56	673
COLORADO---------	31	12,101	3.78	458	193	10,803	4.38	473	8,502	16,542	3.42	567
CONNECTICUT------	487	12,612	3.97	501	893	10,764	4.68	503	13,554	16,052	3.71	595
DELAWARE---------	235	11,015	4.11	453	13	11,721	5.00	587	2,486	16,492	3.64	600
FLORIDA----------	201	11,588	3.41	395	380	10,313	4.10	423	2,556	15,507	3.21	497
GEORGIA----------	127	12,092	3.90	472	666	11,575	4.72	547	8,430	15,358	3.58	551
HAWAII-----------	---	---	---	---	---	---	---	---	928	16,020	3.47	556
IDAHO------------	54	12,433	3.83	476	445	10,537	4.51	475	9,608	16,373	3.52	577
ILLINOIS---------	499	12,197	3.88	473	1,628	10,472	4.69	491	29,766	15,733	3.70	582
INDIANA----------	410	12,452	3.88	483	3,389	11,100	4.73	525	22,285	16,119	3.68	593
IOWA-------------	1,663	11,604	3.86	447	2,192	10,293	4.61	475	30,857	15,085	3.58	541
KANSAS-----------	570	10,478	3.83	402	722	10,212	4.63	473	23,163	15,040	3.55	534
KENTUCKY---------	194	10,069	3.75	378	484	10,182	4.52	460	8,567	15,386	3.54	545
LOUISIANA--------	153	10,302	3.59	370	1,671	10,060	4.28	430	6,537	14,214	3.26	464
MAINE------------	432	12,855	3.89	500	323	10,855	4.54	493	14,032	15,801	3.58	566
MARYLAND---------	545	11,472	3.91	449	1,291	10,302	4.66	481	26,636	16,171	3.63	587
MASSACHUSETTS----	641	11,456	3.97	455	421	11,500	4.51	519	11,124	16,025	3.63	582
MICHIGAN---------	31	12,739	3.66	493	2,024	11,602	4.60	534	42,684	16,660	3.64	606
MINNESOTA--------	890	11,747	3.62	449	3,829	10,326	4.60	475	95,063	15,654	3.60	564
MISSISSIPPI------	200	11,752	3.68	432	326	10,687	4.21	450	4,209	15,219	3.40	517
MISSOURI---------	82	12,463	3.83	477	1,642	10,235	4.52	463	16,507	14,852	3.52	523
MONTANA----------	134	12,524	3.92	491	76	12,389	4.62	597	1,464	15,634	3.50	548
NEBRASKA---------	139	9,567	3.99	382	586	10,421	4.60	479	10,783	14,676	3.60	535
NEVADA-----------	---	---	---	---	---	---	---	---	723	17,708	3.41	604
NEW HAMPSHIRE----	606	12,489	3.92	489	203	10,349	4.53	469	6,933	16,079	3.63	584
NEW JERSEY-------	49	12,331	4.02	495	216	10,917	4.76	520	10,419	16,379	3.72	609
NEW MEXICO-------	113	12,897	3.68	474	489	12,185	4.27	521	6,328	17,240	3.40	586
NEW YORK---------	3,460	12,407	4.00	496	2,715	11,012	4.69	517	132,812	16,189	3.65	591
NORTH CAROLINA---	248	13,310	3.72	496	708	10,721	4.56	488	24,384	16,366	3.49	572
NORTH DAKOTA-----	---	---	---	---	35	8,655	4.99	432	3,012	14,366	3.59	516
OHIO-------------	1,109	12,524	3.75	469	2,962	11,335	4.53	514	40,867	16,842	3.56	599
OKLAHOMA---------	308	11,986	4.03	483	466	11,548	4.57	528	6,572	15,942	3.53	563
OREGON-----------	287	12,416	3.86	479	1,269	11,253	4.63	521	10,524	17,111	3.57	611
PENNSYLVANIA-----	1,477	12,876	3.97	511	4,852	11,118	4.65	517	119,428	16,314	3.71	605
PUERTO RICO------	---	---	---	---	---	---	---	---	1,631	10,849	3.06	332
RHODE ISLAND-----	86	12,480	3.91	488	31	8,812	4.69	414	679	15,706	3.58	562
SOUTH CAROLINA---	---	---	---	---	1,676	11,266	4.64	523	5,537	15,619	3.63	567
SOUTH DAKOTA-----	41	11,152	3.84	428	44	11,742	4.65	546	5,240	14,925	3.61	539
TENNESSEE--------	110	11,783	3.93	464	750	10,481	4.48	470	11,258	15,906	3.57	568
TEXAS------------	4	12,575	3.37	424	376	11,222	4.30	483	12,698	16,177	3.40	550
UTAH-------------	30	11,886	3.71	441	5	12,776	4.11	525	9,174	17,219	3.40	586
VERMONT----------	1,424	12,262	3.82	468	508	10,751	4.63	497	26,320	15,600	3.59	559
VIRGINIA---------	556	12,558	3.73	468	2,164	10,470	4.63	484	41,991	15,995	3.55	568
WASHINGTON-------	365	13,543	3.95	534	2,395	11,991	4.66	559	22,548	17,685	3.52	622
WEST VIRGINIA----	255	11,052	4.03	446	237	9,486	4.78	453	6,821	15,597	3.49	545
WISCONSIN--------	923	12,322	3.87	477	6,882	10,979	4.65	511	123,577	16,329	3.73	610
WYOMING----------	1	6,540	3.64	238	46	13,837	4.46	617	614	16,017	3.38	542
UNITED STATES----	19,467	12,167	3.89	473	56,246	11,003	4.59	506	1,143,648	16,354	3.61	591

1/ DASHES INDICATE NO LACTATION RECORDS REPORTED.

TABLE 2.--STATE AND NATIONAL STANDARDIZED LACTATION AVERAGES FOR JERSEY, BROWN SWISS, AND MILKING SHORTHORN COWS ON OFFICIAL TEST, CALVING IN 1977 1/

STATE	JERSEY				BROWN SWISS				MILKING SHORTHORN			
	RECORDS	MILK	FAT	FAT	RECORDS	MILK	FAT	FAT	RECORDS	MILK	FAT	FAT
	NUMBER	LB	PCT	LB	NUMBER	LB	PCT	LB	NUMBER	LB	PCT	LB
ALABAMA----------	2,107	11,610	4.52	525	174	12,245	3.86	472	---	---	---	---
ALASKA-----------	---	---	---	---	---	---	---	---	---	---	---	---
ARIZONA----------	1,020	11,712	4.86	570	871	16,088	3.86	622	44	12,795	3.54	452
ARKANSAS---------	836	9,098	4.64	423	55	13,358	3.75	500	84	11,477	3.51	403
CALIFORNIA-------	6,064	11,761	4.97	585	679	15,662	4.03	631	138	13,441	3.51	471
COLORADO---------	311	11,388	4.74	539	305	14,317	4.03	576	34	11,234	3.60	404
CONNECTICUT------	361	10,260	4.96	508	265	13,305	3.96	527	1	9,540	3.74	357
DELAWARE---------	22	9,969	4.78	477	5	13,678	4.49	614	---	---	---	---
FLORIDA----------	829	9,652	4.08	395	540	12,236	3.57	437	---	---	---	---
GEORGIA----------	1,445	9,727	4.87	474	339	13,391	3.84	514	---	---	---	---
HAWAII-----------	---	---	---	---	1	13,280	3.41	453	---	---	---	---
IDAHO------------	925	10,518	4.83	508	114	13,466	3.88	523	2	16,925	3.77	639
ILLINOIS---------	1,007	9,387	4.97	466	1,250	12,978	4.11	534	63	13,115	3.68	483
INDIANA----------	1,576	9,531	4.96	473	902	14,208	4.02	571	45	10,680	3.82	408
IOWA-------------	2,032	9,690	4.81	466	3,171	13,114	4.01	526	406	10,793	3.62	391
KANSAS-----------	593	9,435	4.76	449	332	12,293	3.89	478	6	10,573	3.53	372
KENTUCKY---------	1,984	10,049	4.65	468	286	12,032	3.68	442	7	10,944	3.57	384
LOUISIANA--------	1,807	9,310	4.56	425	85	11,636	3.66	426	---	---	---	---
MAINE------------	1,179	11,621	4.79	556	85	12,089	3.90	471	103	8,759	3.56	312
MARYLAND---------	517	8,544	4.89	418	241	12,503	3.96	495	27	9,203	3.79	349
MASSACHUSETTS----	1,084	10,396	4.97	517	54	12,272	3.84	471	31	10,661	3.64	388
MICHIGAN---------	1,585	9,902	4.96	491	296	13,362	4.00	535	19	11,758	3.49	411
MINNESOTA--------	2,065	10,039	4.82	486	1,417	12,985	3.95	513	544	11,772	3.57	420
MISSISSIPPI------	1,597	9,869	4.58	452	17	13,849	3.81	525	---	---	---	---
MISSOURI---------	1,566	9,655	4.77	461	504	12,205	3.94	481	123	11,789	3.76	442
MONTANA----------	4	8,525	4.66	397	31	13,005	4.12	536	---	---	---	---
NEBRASKA---------	117	10,341	4.72	489	529	12,325	4.17	514	139	9,279	3.84	356
NEVADA-----------	440	12,049	4.69	566	---	---	---	---	---	---	---	---
NEW HAMPSHIRE----	1,056	10,817	4.89	529	60	10,850	3.92	425	7	10,013	3.61	359
NEW JERSEY-------	324	11,721	4.74	555	95	13,265	3.93	521	---	---	---	---
NEW MEXICO-------	30	11,797	4.88	576	100	13,160	4.08	536	---	---	---	---
NEW YORK---------	4,133	10,327	5.05	522	1,458	13,240	4.04	535	46	10,750	3.61	388
NORTH CAROLINA---	1,899	10,326	4.78	494	244	12,525	3.92	491	1	11,020	2.70	297
NORTH DAKOTA-----	16	7,557	4.97	376	159	13,869	4.03	559	30	10,986	3.66	402
OHIO-------------	4,389	10,565	4.89	516	1,622	14,666	4.01	589	143	11,575	3.78	438
OKLAHOMA---------	616	9,350	5.07	474	233	12,183	3.89	474	147	12,391	3.51	435
OREGON-----------	3,402	11,110	4.99	555	604	14,284	4.07	582	7	11,043	4.17	464
PENNSYLVANIA-----	3,983	10,345	4.87	504	802	13,673	4.07	556	93	11,075	3.62	401
PUERTO RICO------	---	---	---	---	4	10,043	3.34	336	---	---	---	---
RHODE ISLAND-----	3	10,340	4.70	486	3	10,963	4.47	490	---	---	---	---
SOUTH CAROLINA---	3,339	11,376	4.90	558	46	14,278	3.77	536	---	---	---	---
SOUTH DAKOTA-----	113	9,606	5.14	494	252	12,450	3.97	495	66	10,280	3.49	359
TENNESSEE--------	3,853	10,484	4.72	495	415	13,415	3.89	522	---	---	---	---
TEXAS------------	3,484	10,408	4.52	470	1,318	13,325	3.72	496	6	9,512	3.05	291
UTAH-------------	583	10,879	4.67	509	79	13,515	3.83	518	3	18,203	3.69	672
VERMONT----------	5,178	10,579	4.84	512	199	14,175	3.86	548	25	12,676	3.44	437
VIRGINIA---------	829	10,479	4.91	515	177	13,013	3.91	509	4	10,510	3.48	366
WASHINGTON-------	3,568	11,592	4.94	573	326	14,999	3.86	579	41	14,932	3.35	501
WEST VIRGINIA----	324	11,002	4.85	533	4	12,680	3.85	494	---	---	---	---
WISCONSIN--------	2,539	9,914	4.88	484	2,805	13,616	3.99	544	258	11,995	3.65	438
WYOMING----------	51	10,185	4.62	471	---	---	---	---	---	---	---	---
UNITED STATES----	76,785	10,546	4.83	510	23,553	13,502	3.96	535	2,693	11,448	3.61	414

1/ DASHES INDICATE NO LACTATION RECORDS REPORTED.

Table 3.--Number of records and national averages for production for calvings, 1971-77

Breed	1971	1972	1973	1974	1975	1976	1977	Change-- 1971-77
				Records (Number)				
Ayrshire------------	19,478	19,564	18,683	18,721	18,695	18,632	19,467	-11
Guernsey------------	78,691	75,057	69,680	65,631	62,149	59,454	56,246	-22,445
Holstein------------	850,379	898,918	919,735	967,469	1,014,257	1,077,884	1,143,648	+293,269
Jersey--------------	74,132	74,374	71,557	70,780	71,812	74,305	76,785	+2,653
Brown Swiss---------	21,001	21,376	21,057	21,252	21,635	22,451	23,553	+2,552
Milking Shorthorn---	2,635	2,663	2,442	2,595	2,648	2,680	2,693	+58
				Milk (Lb)				
Ayrshire------------	11,457	11,363	11,322	11,578	11,730	12,051	12,167	+710
Guernsey------------	10,231	10,166	10,133	10,397	10,573	10,932	11,003	+772
Holstein------------	14,984	14,885	14,837	15,211	15,528	16,174	16,354	+1,370
Jersey--------------	9,528	9,559	9,588	9,888	10,150	10,426	10,546	+1,018
Brown Swiss---------	12,810	12,703	12,658	12,806	13,063	13,500	13,502	+692
Milking Shorthorn---	10,217	10,056	10,182	10,421	10,596	11,174	11,448	+1,231
				Fat (Pct)				
Ayrshire------------	3.91	3.93	3.90	3.91	3.90	3.92	3.89	-.02
Guernsey------------	4.66	4.67	4.62	4.62	4.61	4.62	4.59	-.07
Holstein------------	3.63	3.64	3.64	3.66	3.65	3.64	3.61	-.02
Jersey--------------	4.99	4.99	4.94	4.92	4.90	4.88	4.83	-.16
Brown Swiss---------	4.03	4.03	3.99	4.00	3.97	3.98	3.96	-.07
Milking Shorthorn---	3.66	3.67	3.64	3.66	3.64	3.60	3.61	-.05
				Fat (Lb)				
Ayrshire------------	448	446	442	453	457	472	473	+25
Guernsey------------	477	474	469	481	487	506	506	+29
Holstein------------	545	543	540	557	566	588	591	+46
Jersey--------------	476	477	473	486	497	509	510	+34
Brown Swiss---------	516	511	505	513	519	538	535	+19
Milking Shorthorn---	374	369	371	381	386	403	414	+40

Table 4.--Changes in number of records from calvings by breed for 16 States, 1971-77 [1]

State	Ayrshire	Guernsey	Holstein	Jersey	Brown Swiss	Milking Shorthorn
	Pct	Pct	Pct	Pct	Pct	Pct
New York--------	-11	-33	+16	+13	+1	--
Pennsylvania----	-21	-37	+28	+32	-20	+45
Wisconsin-------	+32	-16	+42	+20	+36	-17
Minnesota-------	+21	+4	+48	+23	+23	+39
California------	--	-32	+111	+13	--	+1
Ohio------------	-2	-29	+17	-13	+7	+42
Michigan--------	--	-12	+26	-13	--	--
Virginia--------	+32	-28	+43	--	--	--
Illinois--------	-8	-38	+14	-31	-8	-29
Iowa------------	+27	-8	+20	+4	+36	-3
Kansas----------	-31	--	+8	--	-36	--
Vermont---------	-8	--	+30	+12	--	--
Indiana---------	--	-13	+33	--	+6	-42
Washington------	--	-14	+45	+42	--	-35
Oregon----------	--	-17	+61	+20	+1	--
South Carolina--	--	-37	+14	+21	--	--

[1] Dashes indicate that fewer than 2 percent of 1971 non-Holstein breed records came from this State.

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POLICIES OF ANIMAL IMPROVEMENT PROGRAMS LABORATORY (AIPL) FOR DISTRIBUTING BULL-OWNER SIRE SUMMARIES

By Frank N. Dickinson [2]

Summary of Distribution Policy

The Summaries calculated in each Sire Summary run will be mailed directly to the owner of each bull summarized, approximately 1 week prior to the general distribution of Sire Summaries to cooperators in the National Cooperative Dairy Herd Improvement Program (NCDHIP).

Determination of Ownership for Mailing Purposes

AIPL receives the name and mailing address of each registered bull owner from the respective breed association. AIPL uses breed association records as the source of bull-owner data. We cannot change or supplement ownership based on requests from the field, maintain separate mailing lists of bull owners, produce varying numbers of copies of Sire Summaries, or arbitrate conflicting claims of bull ownership because of the volume of Sire Summaries and limitations on our resources. All requests to update bull-owner names and addresses should be directed to the appropriate breed association.

Members of syndicates and other multiple ownership arrangements should furnish the breed association an owner name and address that permits postal delivery of the Sire Summary and should arrange to furnish coowners with Sire Summary information. Vague ownership information such as "XYZ Syndicate, Beltsville, MD" frequently results in nondelivery of Sire Summaries.

Individuals and organizations receive bull-owner Sire Summaries for bulls that they own or lease if they have been assigned a "Stud Code Number" by the National Association of Animal Breeders (NAAB) and if they have notified AIPL prior to each run, using prescribed procedures.

Organizations having control over a group of bulls and desiring to receive Sire Summaries during the bull-owner mailing should obtain a "Stud Code Number" from the NAAB Central Office and then contact AIPL for instructions on updating bull ownership and status lists prior to each run.

We hope that the procedures outlined herein will enable all bull owners to receive Sire Summaries on their bulls prior to the general distribution to cooperators in NCDHIP. We regret that we do not have resources to maintain special mailing lists of bull owners or to give special handling to large numbers of Sire Summaries.

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